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AUTHOR Brown, Gordon F.; And Others
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ABSTRACT

A goal of increased effectiveness of teacher-student communication led to the development and validation of an 18-item scale, RAM, which classified subjects into categories of Relative, Absolute, and Mixed relative-absolute philosophical orientation to the nature of reality. After three pilot studies using a total of 202 subjects, RAM was administered to 261 community college students. The results were correlated with the students' grade point average, the number of classes dropped in the prior two semesters, life-time job preference for security versus challenge, preference for minimal tension in an educational system, and teacher-centered versus personal-centered factors involved in dropping classes. Statistically significant findings indicated that RAM reliably differentiated between the three philosophical positions, that students classified as absolute and mixed preferred minimal educational system tension, and that student-centered characteristics were more important than teacher-centered factors in dropping classes. Philosophical categories were found to be unrelated to grade point average, incidence of dropping classes, and life-time job characteristics. (RT)

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THE RELATIONSHIP OF SCORES OF COMMUNITY COLLEGE STUDENTS ON A MEASURE OF PHILOSOPHICAL ORIENTATION TO THE NATURE OF REALITY TO THEIR STANDING ON SELECTED SCHOOL-RELATED VARIABLES

Gordon F. Brown
Pasadena City College

William B. Michael
University of Southern California

Claudia R. Wright
School of Communication, Los Angeles

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Gordon F. Brown
Pasadena City College

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Abstract

A description is presented of an 18-item scale entitled RAM that was designed to indicate a relative, absolute, or mixed relative-absolute philosophical orientation to the nature of reality. For a sample of 261 community college students both item analysis data and correlational information concerning the relationship between placement within each of three classifications of philosophical orientation derived from RAM scores and standing on each of five school-related criterion variables are summarized. Item statements on the RAM scale reliably differentiated between subsamples of students categorized as relative or absolute. Statistically significant indices of association occurred between placement in one of three score categories on the RAM scale and standing on each of two criterion variables: (a) stated preference for an educational system designed to facilitate accepting tension and frustration or one planned to minimize these factors and (b) expressed reason for dropping the course as being related either to teacher-centered or to personal student-centered characteristics. No statistically reliable level of association was present between placement in one of the three score categories and (a) an index of scholastic achievement, (b) incidence of dropping classes, and (c) declared preference for a job offering challenge and responsibility or for one affording security and dignity.

It is possible to postulate that the perceptions which individuals have of events occurring in the environment differ as a function of their holding a relative, absolute, or mixed relative-absolute philosophical orientation to the nature of reality. For the objectives of this study, a relativist is defined as a person who maintains that knowledge is uniquely dependent upon the perceiver and upon the ways in which his sensory system mediates the external world prior to his

experiencing a conscious awareness of relationships among environmental stimuli; an absolutist is described as one who assumes that the outside world exists as a knowable, external reality with certain immutable truths that exist independent or irrespective of the perceiver. Thus, if a tree falls in a forest uninhabited by human beings, the absolutist would declare that the falling tree created a loud sound; whereas the relativist would state that a sound would not occur without an observer present to perceive it after his sensory system had processed the incoming stimuli or, rather, sources of energy created by the falling tree. A person with a mixed orientation holds that perceptions from both points of view would be useful for understanding the nature of reality, although he might tend to have a preference for one orientation or the other.

In addition to a philosophical orientation of relativists and absolutists toward knowledge, similar distinctions regarding methods of acquiring knowledge and ways of valuing it could be stated. Very briefly, from the standpoint of methods, an absolutist champions his procedures of increasing objectivity as in the use of scientific approaches, logical analyses, recognized specialists, and empirical techniques that can establish or prove invariant principles or laws about the universe and that can give rise to conceptualization of the external reality of the universe as it exists independent of man. On the other hand, the relativist addresses himself to methods of increasing a consistency of human experiences and of the interrelationships of the components of these experiences as perceived by individuals.

The relativist would argue that his methods permit him to confirm theories and hypotheses that render his experience coherent.

In the instance of values, the primary distinction made is that one with an absolute view endeavors to choose the truth to become good, whereas one with a relative orientation tries to select alternatives that give rise to identity or being. The absolute view of values tends to encourage conformity or to sanction behavior that is consistent with the known truth; the relative view of values gives support to the generation of individual differences, as alternative behaviors are available, but without emphasis upon or concern for truths that are evaluated for their goodness or badness.

The educational system substantially involves the communication of ideas about reality. If individuals do in fact see different realities and if some generalization can be made about these views of reality, it would seem incumbent upon members of the educational system to identify the view of reality logically associated with the ideas being communicated. That is, to maximize communication within the educational system, it may be useful to identify how a given student and teacher see reality as well as to clarify the assumptions of reality associated with material being communicated. Clearly, identification of similarities and differences in philosophical orientations of teachers and students could provide important information to increase the effectiveness of communication in instructional programs and in counseling experiences--information that could

minimize interpersonal philosophical conflicts.

The lack both of an operational definition of relativism versus absolutism and of the corresponding instrumentation necessary to represent empirically the distinction between these two constructs has prevented prior investigatory efforts in carrying out needed research. Hence, to provide information regarding the philosophical orientation of individuals to reality, a scale of 18 items was devised and partially validated. Corresponding to whether a person was relative (R), absolute (A), or mixed (M) in his philosophical view, the acronym RAM was generated as a name for the measure developed.

Purpose

For a sample of 261 community college students, who had been identified as relative, absolute, or mixed in their philosophical orientation to reality on a measure entitled the RAM scale, the purpose of this investigation was to identify the nature of relationships between placement of students on the RAM scale and their standing on each of five criterion variables: (1) grade point average (GPA) earned during their previous college semester; (2) number of classes dropped during two previous semesters while students maintained an enrolled status; (3) declared preference for a life-time job offering either security and dignity or challenge and responsibility; (4) stated preference for an educational system designed to facilitate accepting tension and frustration or one planned to minimize tension and frustration; and (5) expressed reason for dropping a class as being primarily

associated with teacher-centered factors or with personal student-centered characteristics. Thus the focus of this exploratory study is primarily descriptive of relationships that the RAM exhibited with respect to each of five school-related variables.

The Development of the RAM Scale

Selecting 18 Pairs of Statements

Primarily from the disciplines of psychology, education, and philosophy, books were selected on the basis of having been used as school texts or of having been authored by an educator, such as a teacher or an administrator. Next, from the books, statements were taken, or paraphrased, which were thought to be consistent with either a relative or an absolute view of reality.

The statements were paired so that each pair would contain a relative and an absolute sentence addressing a common point--sentences reflecting an apparent contradiction with reference to the relative and absolute assumptions. The order of statements within each pair was randomly determined.

Illustrative Examples of Items

Each of three sets of six pairs of statements was designed to fit within one of three descriptive categories: Knowledge, Methods, or Values. Corresponding to each of these three categories in their order of enumeration are three pairs of items: 1 and 3, 10 and 11, and 14 and 15 as follows:

Knowledge:

1a There is one "reality" for all mankind, even if we have not discovered all of it, or even any of it perfectly.

1b Everyone can only know his own personal unique world, based on his own experience; and so there are as many "realities" as there are people; and one is no more real than any other.

3a Man can know and worship God.

3b Man can only worship his own personal image of "God."

Methods:

10a Scientific research methods tend to prove the truth of hypotheses (educated guesses); such as proving the theory of gravity to be true.

10b Scientific research methods tend to invent models which render experience economical and connected; such as inventing a model (or concept) called "gravity" in order to render our experience of falling objects economical and connected.

11a "Seeing is believing"; though I may not see everything, if I see it, a tree for example, I know that it is really there in substantially the way I see it.

11b How I see things is substantially affected by may past experiences, as well as by the characteristics of my eyes (ears, etc.), so that even if I "see" something clearly, I have no reason to believe that it exists "out there" in space, so to speak, as I see it. That is, what I see, and what is out there, may not be similar at all.

Values:

14a The greatest service a man can render is to himself.

14b The greatest service a man can render is to others.

15a There is no such thing as a "right" answer; there are only "answers" with which someone agrees.

15b For every specific problem, there is a specific "right" answer.

Scoring the RAM and Identifying the Relative, Absolute, and Mixed Subjects

A subject's total score was equal to the total number of absolute statements selected from the 18 possible. For example, a score of 16 would indicate that the examinee selected 16 absolute statements and two relative statements as making most sense to him.

Subjects classified as relative were those students receiving a score low enough to place them below the 25th percentile, or within the bottom or first quarter of the score distribution. Correspondingly categorized as absolute were those who received a score at or above the 75th percentile or high enough to place them in the top or fourth quarter. Finally examinees who fell between the 25th but below the 75th percentile were defined as belonging to the mixed category--in other words, those students within the middle portion or within the second and third quarters. Because of the presence of tied scores, it was not possible to assign students in precisely percentages of 25, 50, and 25 to the respective categories of relative, mixed, or absolute.

Content Validity

A measure of content validity was used to establish a relationship between the RAM statements and the relative or absolute descriptions by a procedure reported by Brown (1968, p. 80, p. 117). The 18 pairs of statements were given to seven independent raters along with the descriptions and examples of the

assumptions germane to absolute or relative orientations. The raters were asked to identify the absolute and relative statement in each pair. All 18 pairs of statements met the criterion level of being identified in the same way by at least six of the seven raters.

To establish the stability of rater judgment over time, the raters were again given the 18 pairs of statements along with the descriptions and examples of the two orientations, after a five month lapse. All 18 pairs of statements were again verified as reflecting the previously discussed category membership by at least six of the seven raters.

Reliability

A measure of internal consistency was obtained by dividing the scale into two parts (odd-numbered items and even-numbered items). A correlation coefficient of .48 ($p < .001$) was obtained between scores on nine odd-numbered and scores on nine even-numbered items. Application of the Spearman-Brown formula yielded a corrected coefficient of .65.

Item Discrimination Power

To measure the ability of each of the items to differentiate between subjects who had been classified as relative or absolute, an item analysis was run on each pair of statements. For each of the two contrasted subgroups of subjects who respectively had placed in the top quarter or bottom quarter of the RAM score distribution, the numbers of individuals who had selected each of the two alternative statements (relative or absolute) were

tabulated. The resulting fourfold contingency tables were subjected to chi square analyses. Chi square tests yielded significance beyond the .001 level for 17 of the 18 pairs of statements and significance beyond the .005 level for one item.

Pilot Studies

Three pilot studies were run through using a total of 202 subjects to increase the readability of the questionnaire, to refine data collection techniques, and to identify any unusual characteristics of the sample population.

Method

Sample

Subjects were 261 community college students in a Los Angeles suburb who were enrolled in introductory social science courses, primarily psychology classes. Their chronological age ranged between 16 and 66 years, with 184 (70%) being between 18 and 21 years. Of the subjects, 158 (60.5%) were female and 102 (39.5%) were male.

Instructions to Subjects

Subjects were provided with a cover-sheet attached to the RAM scale and with an accompanying questionnaire (separately mimeographed), which contained the directions for marking of anwers. The first cited author instructed students to read the cover-page before proceeding to the questionnaire. In the directions, the respondent was asked to read the statements of each pair and to select the statement in each pair that "makes

more sense to you." (The score earned on the entire complement of 18 items constituted the antecedent or predictor variable.)

Criterion Variables

In addition, the subjects were asked to respond to each one of five questions (mimeographed on a sheet appended to the RAM scale), which served as criterion variables. The questions pertained to (1) an estimate by the examinee of his grade point average (GPA) earned during the previous semester; (2) number of classes dropped during the previous two semesters while maintaining status as an enrolled student; (3) preference for dignity and security versus challenge and responsibility in a life-time job; (4) preference for an educational system designed to accept tension and frustration as a natural and perhaps necessary condition for growth or for one minimizing these factors to create pleasant conditions for growth; and (5) an examinee's primary reason for dropping a class as being associated either with teacher-centered characteristics or with personal student-centered characteristics.

Statistical Analyses

For each of the five subquestions, chi square tests of independence were carried out to ascertain whether a statistically significant relationship existed between placement within one of the three score categories afforded by the RAM scale and membership in two or more of the categories specified on each of the five criterion variables. For the two contingency tables yielding statistical significance, contingency coefficients were calculated. Alpha level was set at .01.

Findings

The following results are summarized:

1. Statistically reliable associations occurred between placement on the RAM scale and only two criterion variables: (a) stated preference for an educational system designed to facilitate accepting tension and frustration or one planned to minimize these factors ($p < .002$), and (b) expressed reason for dropping a course as being related either to teacher-centered or to personal student-centered characteristics ($p < .001$). (The relevant data are presented in Tables 1 and 2.)

2. As revealed in Table 1, percentages of students classified as absolute, mixed, or relative that expressed preference for an educational system designed to minimize tension and frustration were 70.7, 68.2, and 44.6 respectively.

3. As shown in Table 2, corresponding percentages of students citing personal-centered (rather than teacher-centered) factors as the reason for dropping classes were 70.7, 57.4, and 82.4.

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Insert Tables 1 and 2 near here

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Conclusions

The following conclusions are suggested from data analyses:

1. Items on the RAM scale reliably differentiate between student samples classified as relative or absolute.

2. Philosophical orientation toward reality seems to be unrelated to scholastic achievement, incidence of dropping classes, or job characteristics of challenge and responsibility or of security and dignity.

3. Students with a relative orientation to reality appear more willing to accept tension and frustration in an educational system, whereas those with a mixed or absolute view prefer minimization of tension and frustration.

Recommendations

The following recommendations are offered:

1. To ascertain whether the results could be generalized or extended, this study should be replicated in diverse college and university settings.

2. In identifying correlates of course dropping, college administrators should consider student-centered characteristics at least as much as teacher-centered factors.

Reference

Brown, B. B. The experimental mind in education. New York: Harper and Row, 1968.

TABLE 1

RELATIONSHIP BETWEEN TRICHOTOMOUS PLACEMENT OF STUDENTS ON THE RAM SCALE AND THEIR STANDING ON THE CRITERION VARIABLE INDICATING PREFERENCE FOR EDUCATIONAL SYSTEM[a]

Trichotomous Placement on the RAM Scale	Preference for Educational System Designed to: Minimize Tension	Preference for Educational System Designed to: Accept Tension	Row Total
Absolute	41 (15.7) 70.7 25.3	17 (6.5) 29.3 17.2	58 (22.2) 100.0
Mixed	88 (33.7) 68.2 54.3	41 (15.7) 31.8 41.4	129 (49.4) 100.0
Relative	33 (12.6) 44.6 20.4	41 (15.7) 55.4 41.4	74 (28.4) 100.0
Column Total	162 (62.1) 100.0	99 (37.9) 100.0	261 (100.0)

NOTE: $X^2(2) = 13.50$, $p < .002$ ($C = .22$)

[a]Within each cell the first entry represents the frequency, and the number immediately beneath it within parentheses the percentage which that frequency constitutes of the total number of cases. The third value portrays the percentage which the number of cases within the cell constitutes of the total row frequency; the fourth entry, the percentage which the number of cases within the cell is of the total column frequency.

TABLE 2

RELATIONSHIP BETWEEN TRICHOTOMOUS PLACEMENT OF STUDENTS ON THE RAM SCALE AND THEIR STANDING ON THE CRITERION VARIABLE INDICATING REASONS FOR DROPPING A CLASS[a]

Trichotomous Placement on the RAM Scale	Reason for Dropping a Class: Teacher-Centered	Reason for Dropping a Class: Personal-Centered	Row Total
Absolute	17 (6.5) 29.3 20.0	41 (15.7) 70.7 23.3	58 (22.2) 100.0
Mixed	55 (21.1) 42.6 64.7	74 (28.4) 57.4 42.0	129 (49.4) 100.0
Relative	13 (5.0) 17.6 15.3	61 (23.4) 82.4 34.7	74 (28.4) 100.0
Column Total	85 (32.6) 100.0	176 (67.4) 100.0	261 (100.0)

NOTE: $X^2(2) = 13.82$, $p < .001$ ($C = .22$)

[a]See footnote in Table 1

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